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|----------------------------|-------------|----------------------|---------------------|------------------|
| 09/918,964 | 07/31/2001 | Morihiko Minowa | FUJO 18.889 | 2573 |
| 26304 | 7590 | 08/20/2007 | | |
| KATTEN MUCHIN ROSENMAN LLP | | | EXAMINER | |
| 575 MADISON AVENUE | | | BAYARD, EMMANUEL | |
| NEW YORK, NY 10022-2585 | | | | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2611 | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/918,964

Applicant(s)

MINOWA ET AL.

Examiner

Emmanuel Bayard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This is in response to amendment filed on 5/21/07 in which claims 1-11 are pending. The applicant's amendments have been fully considered but they are moot based on the new ground of rejection. Therefore this case is made final.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 –8 and 10-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Hamada et al U.S. Pub No 2004/0266354 A1.

As per claims 1 and 11, Hamada et al teaches a synchronization detecting apparatus making synchronization detection by using a pilot signal that comprises a plurality of bits and at least one bit of said plurality of bits is used as a synchronization signal, comprising:
a channel estimating unit making channel estimation by using the pilot signal from which a predefined part of the pilot signal is removed (see fig.12 element 42 and pages 7-8 [0110]; and
a finger is the same as the claimed (synchronization signal demodulating unit demodulating) each-said at least one bit of the synchronization signal by using a result of the channel estimation, wherein
said predefined part is defined for each target bit of the synchronization signal to be demodulated and is defined so as to include the target bit ((see fig.12 elements 37 and page 8 [0110]);
synchronization detection is made by using the demodulated synchronization signal(see fig.12 element 43 and page 8 [0110]).

As per claim 2, Hamada et al inherently teaches wherein said predefined part is a slot including the target bit of the synchronization signal.

As per claim 3, Hamada et al inherently teaches wherein said channel estimating unit divides signal bits used for channel estimation into groups, and said predefined part is a group including the target bit of the synchronization signal (see fig.12 and page 8 [0111]).

As per claim 4, Hamada et al teaches wherein said predefined part is the target

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bit.

As per claim 5, Hamada et al inherently teach wherein said channel estimating unit also serves as a channel-estimating unit for demodulating data (see fig.12 and page 8[0110]).

As per claim 6, Hamada et al inherently teaches wherein said channel estimating unit makes weight coefficients, which are applied to a process result of each slot, different from weight coefficients for data demodulation, which are used at the time of channel estimation, when making the channel estimation (see pages 7-8 [0110]).

As per claim 7, Hamada et al inherently teaches wherein weight coefficients, which are applied to each slot at the time of channel estimation, are varied according to reception quality information obtained from a reception quality estimating circuit.

As per claim 8, Hamada et al inherently teaches wherein weight coefficients, which are applied to each slot at the time of channel estimation, are varied according to a fading speed obtained from a fading frequency estimating circuit (see fig.12 element 42 and page 7 [0094]).

As per claim 10, Hamada et al inherently teaches wherein synchronization detection is made by using an output of a path having a largest correlation value among outputs of a RAKE receiver of a code division multiple access-receiving device (see fig.12 element 39 and page 8 [0111]).

Allowable Subject Matter

3. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

wherein synchronization detection is made by setting at least one parameter of parameters for synchronization detection, which comprise a parameter indicating a number of error-tolerable bits of the synchronization signal, a parameter indicating a number of backward guard stages, and a parameter indicating a number of forward guard stages, according to a state of a propagation path wherein the state is indicated by at least one of reception quality information obtained from a reception quality estimating circuit, a fading speed obtained from a fading frequency estimating circuit, and a number of pilot symbols.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yoshida et al U.S. Patent No 6,081,516 B1 teaches multi-user receiving device.

Dabak et al U.S. Pub No 20060280230 A1 teaches a wireless communication.

Murai et al U.S. patent no 6,154,487 teach a spread spectrum.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM)
Alternate Friday off.

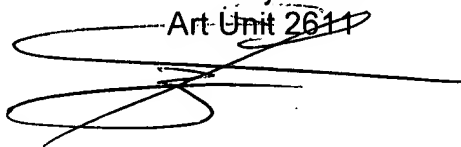
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571 272 3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

8/16/2007

Emmanuel Bayard
Primary Examiner
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A handwritten signature in black ink, appearing to be 'Emmanuel Bayard', written over the printed name and title.